



The study of additional food for children of elementary school program, based on local food (*local food based school meals, LFBS*) by facilitating local community in Kupang Regency 2014

Carmen Siagian¹, Angkasa Sebayang², Adolfin Rosani³, Bona Simanungkalit⁴, Danielle Tahitoe⁵, Luci Widasari⁶

Department IKK/IKM Fakultas Kedokteran Universitas Kristen Indonesia

Department IKK/IKM Fakultas Kedokteran UPN Veteran Jakarta

Corresponding Address: Mr.Carmen Siagian, Department IKK/IKM Fakultas Kedokteran Universitas Kristen Indonesia.

Email: anwar_envi@yahoo.com

Abstract:

Background The program of recommending additional food for school children (PMT-AS) based on *Local Food Based School Meals* (LFBS) has been carried out since year 2011 by *World Food Programme* (WFP) to schools in Kupang regency. The program is intended for 7139 students and 656 teachers including parents (*community participation*) which is expected to be able to escalate students' presence at school, to generate healthier students, and to expand more enthusiastic in following the classes where finally to be capable of increasing the achievement of the students themselves.

Method The applied methodology is a qualitative study by collecting data through questionnaire and in-depth interview as well as through *Focus Group Discussion* (FGD) with the students, parents and teachers. On the other hand, it also applies *Multistage Random Sampling* to the elementary schools within Kupang regencies which received PMT-AS from the WFP. The data collecting is by filling up the forms of *in-depth interview*/FGD. **The Conclusion:** The carrying out of this study is to identify the program of additional food contribution for children of elementary school (PMT-AS) based on local food by facilitating the local community of Kupang regency and as well as to identify the benefit of PMT-AS, the quality and quantity of PMT-AS, the number of students' presence at school after receiving PMT-AS program, and the episode of students' illness after receiving PMT-AS program. **Recommendation:** the whole community especially parents and teachers are required to understand the benefit of PMT-AS. With the understanding to the program, the PMT-AS can become a self standing and continual program to be carried out by the community. The food of PMT-AS is expected to come from the agricultural product. It means that it is not allowed to come from industrial processed food nor the food from the city such as powdered milk, canned milk, paper bag milk, instant noodle, bread or cake made as industrial product. The content of nutrient of food should be based on quality aspect.

Key words: Additional food contribution, Nutrient status, Student of elementary school

Introduction:

The problem of nutrient for children up to 5 years till 12 years are the shortness for about 30%, fatness till overweight for about 10.9% and thinness till slimness for about 9.9%. As for estimation of total number, the shortness for children from 6 months to 12 years becomes 31.7% followed by 7.8% of thin and very thin children and fat to overweight children for 9.9%. Most of short children are boys than girls. Prevalence the very short boys and short are 8% and 32.1% as for girls 6.5% and 31.3% (Seanuts, 2013). According to base health research (Riskesdas/riset kesehatan dasar) is known that nutrient problem for school year children between 6 to 12 years old is still big, about 35.6% short children, 12.2% thin children, and 9.2% fat

children. Other problem found is 44.6% school year children still consume low quality breakfast (Riskesdas, 2013).

School year children are easily reached by various government program of nutrient improvement through *Usaha Kesehatan Sekolah* (School Health Service) or by private organization through Additional food contribution program for school year children (PMT-AS). But there are still various dissatisfaction nutrient conditions of school year children. The main factor consists of direct factor and indirect factor.

The development in the province of NTT (East Nusa Tenggara), as related to the food and nutrient stamina, still has to face some dilemma such as family food stamina disadvantage, poor utilizing

of dry land and slumbering land, short knowledge in the family about nutrient balance pattern, and there are still many children under 5 years who suffer of low nutrient or bad nutrient.

Poverty in most of village or city makes health problem become greater where children have only small chance to consume healthy food to fulfil good nutrient. There should be more effort to gain physical stamina of the children of elementary school as part of *Additional Food Contribution Program for school year children* (PMT-AS) in Kupang regency as to improve children's health and nutrient, to improve their stamina to follow the class and to elevate their study reputation as well. That is one main point in designing *Additional Food Contribution Program for school year children* (PMT-AS) since 1991/1992.

PMT-AS initially was the outcome of pilot project in 1991/1992 to solve health problem and lack of nutrient, to avoid intestinal worm cases as happens to most of school year children in some poor areas such as in Aceh, West Sumatra, Central Java, Yogyakarta, Bali, West Nusa Tenggara, East Nusa Tenggara, North Sulawesi, Maluku and Papua. The best way as solution for the before mentioned problems is to donate fund to produce healthy food based on local foodstuff, so It can be possible to add to 15% – 20% of daily nutrient need for children (General Guidance of PMT-AS 2003/*Pedoman Umum PMT-AS Tahun 2003*).

Due to support the program of PMT-AS, *The United Nations World Food Program* (UNWFP) has organized Additional Food Contribution Program for school year children in various provinces such as in NTT (East Nusa Tenggara) which was focused in 3 regencies namely Kupang regency, TTS and Belu since 2005 – 2010, the distribution of fortified Biscuit; discussion result with related authorities including the regent of Kupang, to acknowledge that UNWFP should start the pilot project of PMT-AS based on local food. For the year 2010 – 2011, UNWFP joint work with TTS regency to carry out pilot project of PMT-AS based on local food/LFBSM in 20 elementary schools including those 1,668 which had not been reached by National PMT-AS fund, and in August 2011 9 Elementary Schools in Kupang with 1,478 number of students and teachers. For the year 2012, in Kupang regency were 9 elementary schools, year 2013 were 9 elementary schools, year 2014 were 24 elementary schools (WFP).

PMT-AS pilot project in Kupang regency has been a joint-work UN WFP Kupang and local authority of Kupang regency through *Cost Sharing*

mechanism which has been carried out since August 2011 – December 2011 in 9 elementary schools covered 1,432 students and to be continued till publishing of new terms for period of July 2013 – June 2014 with the same goal. Due to the planning for July 2014 – June 2015 can cover 24 elementary schools of 4,000 students and teachers. This program is carried out with the involvement of 3 elements namely WFP to facilitate with main commodity corn, green pea, training, cook appliances, and monitoring. Local authority is expected to facilitate fund to buy sugar, animal protein and monitoring. And for the community (parents, school master, teacher, and local figures) facilitate additional foodstuffs such as coconut, cassava, banana, vegetables, wood, cook etc.

It will be considered to have effort for identification, involvement till evaluation; and the output from the PMT-AS performance based on local food where one of them is to build *Focus Group Discussion* (FGD) to enable to put input forward to accelerate nutrient improvement.

As one of education institution in Indonesia, *Fakultas Kedokteran Universitas Kristen Indonesia – FK UKI Jakarta* (school of medicine, Jakarta - Indonesia Christian University) has responsibility on the acceleration of nutrient improvement, where the content of Tridarma Perguruan Tinggi (3 duties of high educational institution) is to devote to the community and such effort is to identify basic problem related to nutrient, so it can help for the acceleration of nutrient improvement especially for school year children in Kupang regency.

Based on the before mentioned background, *Departemen Ilmu Kedokteran Komunitas Fakultas Kedokteran Universitas Kristen Indonesia – FK UKI Jakarta* (Medical Science Department, Community of School of Medicine of Jakarta – Indonesia Christian University) is attempting to act study related to Strategy Exit Program of distributing additional food for school year children based on local food in Kupang regency, NTT in the year of 2014.

Materials and Methods

Sort of implemented method for this research is a quantitative study to identify the Additional Food Contribution Program for school year children based on local foodstuff through improving community in Kupang regency. Numbers of school in Kupang regency that receive aid program from WFP are 9 elementary schools. It took in consideration based on the distance and time spending, and number of elementary school as sample were 2 schools namely

SDN Besleu and *SDN Raknamo*. Moreover, the research also did an observation to 2 other elementary schools namely *SDN Kairane* and *SDN Fatukanutu*. The observation covered school cantina availability, hand washing tool, cook appliances and kitchen, and food storage. As for the sample are school children from grade 5 elementary school who presented during the process of research and willing to be interviewed, also filled the *Informed Concern* which signed by the teacher. On the other hand, the researchers conducted interview with class head of grade 5, the head master and the parents of students of the *POMG (parent teacher association/PTA)*, one representative from *Dinas Kesehatan Kabupaten NTT*, one representative from *Departemen Pendidikan Kebudayaan Kabupaten Kupang*.

Data collecting system in this qualitative research applied three methods namely Interview, Participated observation, and documentation. Main instrument of research were the researchers themselves were facilitated with tape recorder, camera, interview guidance, and other instrument incidentally needed. Data collecting technique applied interview method, observation method, and documentation. Data analysis was conducted as to follow deductive –inductive method (Faisal, 1990). After all data and information were collected, the next step was to conduct data analyses and process.

The process of data analysing was initially performed by utilizing all direct available data from various sources and marked them as field report. After the data has been thoroughly read, studied, and observed, there will be data reduction by drawing initial conclusion. The initial conclusion is considered as temporary description where should still be correlated with validity by categorizing in various units. The final step is interprets data by applying interpretative method.

Researchers use qualitative descriptive data analysis technique or reflective analysis where an analysis is based on the way of thinking as combination between induction thinking and deduction thinking. This kind of data analysing is required to answer all the already formulated questions during the research processing, such as why, what reason and how. During the research, data analysing is conducted from starting stage of data collecting as a whole, to be rechecked and in a little while to be systemized, till to be logically interpreted as to get validity and credibility of the data obtained in the field. The data analysis is divided into 3 stages namely: First stage is data initializing and data processing (the comprehensiveness of obtained data, writing limitation, clarity of meaning, and the

appropriateness of data with the others), second stage is to organize the data. The criteria according to *Lexy J. Moleong* in his book *Metode Penelitian Kualitatif* (1998:23) that there are 4 criteria used to value the validity and accuracy of data is credibility, transferability, dependability, and conformity.

During the activity of research, the researchers are allowed to take only 5 from the 7 credibility technique of accomplishment of the above data, such as: (a) enthusiasm in observation which means to perform intensive observation to reach full understanding to any important aspects related to topic and focus of the research. (b) Triangulation, It means a technique to check the validity of data by using various sources out of the particular data as comparison. This sort of triangulations consists of; (i) Data Triangulation, comparing received data during the interview. This comparison is to generate same perception to the received data. (ii) Method Triangulation, checking the level of trust to the finding by applying several techniques of data collecting and to check the level of trust of various sources by applying the same technique.

Results and Discussion

Additional Food Contribution for school year children in elementary schools in Kupang regency is performed three times a week which is on Monday, on Wednesday, and on Saturday with 2 interchangeable menu *kolak jagung* (stewed corn) and *bubur jagung* (corn porridge) with Vitas (nutritious powder contains 15 vitamins and minerals). There are 3 groups of well trained cook (12 personnel) for each school. For each village, there is 1 group of trained farmers facilitated with corn grilling machine to support the continuation of the program through their ability to serve good quality foodstuff for this program.

The availability of clean water in *SDN Besleu* comes from stored rain water. There is kitchen (for cooking food from PMT- AS) which is located separately from the school and lack of ventilation. There are 4 to 5 parents who cook the food of PMT-AS for the students. The schooner for PMT-AS is made of plastic glass and placed in teacher room. From the outcome of in-depth interview at *SDN Besleu* gave indication that the students don't know the name of particular *LSM* (social activity organization) that ever paid a visit to the school for last 1 year, but they know the name of *LSM* that gives PMT-AS namely WFP including what they have received from WFP. The students of *SDN Besleu* have recognised the program of WFP since 1 year before (2013) and they can get the

benefit of the WFP program. The benefit of WFP program according to the children is to become intelligent, stronger, and healthier. The children said that the PMT-AS could not make them more diligent to come to the school. The kinds of food given by WFP are biscuit, corn porridge, and stewed banana. The students of *SDN Besleu* said that they like the food given by WFP. Since there is WFP program, the students hardly get sick (flu/cough).

From the outcome of in-depth interview with the students of *SDN Rakmano* gives indication that the children know the name of Social Activity Organization that gave PMT-AS namely WFP and surely know what WFP has offered for the students. The students of *SDN Rakmano* know about WFP program and stated that the program has given so much benefit such as to make healthier. Some student said that since there is PMT-AS has made them more diligent to go to school. The given foodstuffs by WFP are biscuit, corn porridge, and stewed banana. Most of students like the food from WFP and since then they hardly get sick (cough/flu).

From the outcome of in-depth interview with parents of the students of *POMG* (parent teacher association/PTA) gives indication that they don't know the name of the social activity organization which has paid a visit to school in last 1 year, but they know the name of the social activity organization that has offered PMT-AS namely WFP. They also know what has been offered at school. The parents know about the program of WFP since 1 year ago (2013) where the first intervention was biscuit, porridge and stewed. The parents stated that the program conducted by WFP has given so much benefit such as to train the parents how to cook and to know about nutrient. They said that the presence of PMT-AS program makes the student more active to go to school. The food given by WFP is stewed banana, corn porridge, green peas porridge, and stewed. The parents also said that their children like the food given by WFP and since then the children hardly get sick (cough/flu).

From the outcome of in-depth interview with *Dinas Pendidikan dan Kebudayaan* (Education And Culture Institution) of Kupang regency, It can be assured that this education and culture Institution knows the social activity organization which ever visited in the last 1 year likely *Child Land and Handicap*, and surely knows the social activity organization that offers PMT-AS namely WFP, knows what the WFP offers at the schools, has known the WFP program since last 3 years (2011) including the initial intervention likely biscuit, porridge and stewed. The representative of *Dinas*

Pendidikan dan Kebudayaan (education and culture Institution) of Kupang regency stated that WFP program is very advantageous such as giving training to mothers to be able to cook and to understand about the nutrient as well. By PMT-AS program the children can expectantly be more diligent to school. Kind of foodstuffs given by WFP are stewed banana, corn porridge, green peas, and egg. Expectantly, the children like the foods.

From the outcome of in-depth interview with the representative of *Dinas Kesehatan* of Kupang regency, knows the name of social activity organization which offered PMT-AS namely WFP since last 3 years (2011) and stated that WFP program is very advantageous. By the WFP program, the children can expectantly be more diligent to school. Kind of foodstuffs given by WFP are green pea porridge and stewed banana. Expectantly, the children like the foods.

From the outcome of in-depth interview with the regent of Kupang, It can be assured that the regent knows the social activity organization which ever visited in the last 1 year likely Care International, Cheese Timor, APEC, WFP, and ACF (drinking water). The regent also knows PMT-AS program which has been offered by the WFP likely food to schools 3 times and the offering of cooking appliances. The regent stated that WFP program is very advantageous. According to the regent, the benefit of WFP program is the spirit of mentorship for the program. The regent stated that the presence of PMT-AS program has made the children more eager to go to school because of the food. Kind of foodstuffs given by WFP, according to the regent, porridge cooked by the mothers (parents of the students) and the regent also assured that the student like the foods given by WFP and also the children become hardly get infection disease (flu/cough).

From the outcome of in-depth interview with the representative of WFP, can be assured that the representative knows the social activity organization which ever visited in the last 1 year likely *Yayasan Nowa* and *WFI/ACF* (drinking water). The representative of WFP stated that PMT-AS which has been offered since 2005, is advantageous. The intervention of WFP at schools is giving foods to the schools 3 times and cooking appliances as well. The representative of WFP stated that the presence of PMT-AS program has made the children more eager to go to school. Kind of foodstuffs given by WFP, according to the representative of WFP, porridge cooked by the mothers (parents of the students). The representative of WFP assured that the student like

the foods given by WFP and since then, the children become hardly get infection disease (flu/cough).

Conclusion

The carry out program of Additional Food Contribution based on local foodstuff by WFP since 2009 has given great benefit such as the growth of spirit of mentorship in carrying out PMT-AS program. Kind of foodstuffs given by WFP are biscuit, corn porridge, green pea porridge and stewed banana. Since the existence of WFP program, known that the students hardly ever get infection disease (cough/flu).

Recommendation

The foodstuff in PMT-As should better come from local agricultural product. It is not recommended to make use of industrial processed food nor the food from the city, like powdered milk, canned milk, paper bag milk, instant noodle, bread or cake made in as industrial food product. The content of nutrient of food should be minimal 300 calorie and 5 gram protein to be consumed by each child each day of PMT-AS activity, or an additional minimal 15% of calorie and protein daily need. Such amount is same as the input of protein and calorie in breakfast time for village children (if they take breakfast).

There should be continual monitoring and evaluation to the carry out of PMT-AS, in order the intensive aim and guiding of PMT-AS for the school year children can be frequently achieved, improved, and carried out to build clean and healthy elementary school, especially in clean water readiness and room for food storage. Through this program is expected to build a suitable environment of elementary school to contribute to the improvement of study process of the student and able to create study improvement of the students which finally can raise the quality of the elementary school in Indonesia.

There should be an intensive communication between school and parents in order to be able to create effective communication, to be able to eliminate the objectivity and goal of PMT-AS as required namely the nutrient improvement of children to catch study reputation.

Acknowledgement

Authors acknowledge the immense help from the urban and rural mothers and the scholars whose articles are cited and included in references of this manuscript. The authors are also grateful to authors/editors/publishers of all those articles,

journals and books from where the literature for this article has been reviewed and discussed.

Source of funding: Nil

Conflicts of interest: Nil

Bibliography:

- Andrian A Chaniago, 2001, *Gagalnya Pembangunan*, LP3S, Jakarta
- Bjor, Hottne, 2001, *Teori Pembangunan dan Tiga Dunia*, PT Gramedia Pustaka Utama, Jakarta.
- Cornelis, 1997, *Rekrutmen elite Politik, Proses dan Implikasi dalam Prisma Politik Kebudayaan di Tengah Pluralitas*, Pustaka Pelajar, Yogyakarta.
- Doyle P, 1990, *Teori Sosiologi Klasik dan Modern*, Gramedia Pustaka Utama.
- Grayson Llyod, 2001, *Indonesia Today, Challenges of History*, Institute of Southeast Asian Studies, Singapore.
- Henk Schulte N, 2002, *Indonesia in Search of Transition*, Pustaka Pelajar, Yogyakarta
- I Dewa Nyoman S, 2002, *Penilaian Status Gizi*, Penerbit Buku Kedokteran IGC, Jakarta.
- Maleong, Lexi, 1994, *Metodologi Penelitian Kualitatif*, Rosda Karya, Bandung.
- Mukmin, Hidayat, 1986, *Transisi Menuju Demokrasi: Pengalaman Berbagai Negara*, Seminar Pembangunan Politik dan Demokrasi, PAU Sosial UGM.
- Norman T Uphoff, Milton J, 1988, *Local Organization; Intermediaries in Rural Development*, Cornell University Press, London.
- Persatuan Akhli Gizi Indonesia, 1997, *Penuntun Diit Anak*, PT Gramedia Pustaka Utama, Jakarta.
- Susetiawan, 2001, *Institusi Kekuasaan di Desa: Masih Menjadi Kepanjangan Tangan Pemerintah Pusat atau Demokrasi dan Otonomi dalam Menggeser Pembangunan, Memperkuat Rakyat*, editor: Dadang Juliantara, Lapera Press, Jakarta.
- Uphoff, Norman, 1986, *Local Institution Development: An Analytical Source Book With Case*, Kumarian Press, USA.